

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) An optical transmission module comprising:
a light emitting element;
an optical fiber;
a first lens for collimating light from the light emitting element; [[and]]
a second lens for focusing said collimated light to said optical fiber;
a package to which the second lens is fixed to maintain airtightness at an
inside of the package; and
a subassembly on which the light emitting element and the first lens are
mounted, the subassembly being disposed in the inside of the package to be fixed to a bottom
face of the package;

wherein when a focal length of said first lens is designated by a notation f_1 and a focal length of said second lens is designated by a notation f_2 , said first lens and said second lens are arranged such that an optical distance d between a principal plane of a side of said first lens proximate to said second lens and a principal plane of a side of said second lens proximate to said first lens satisfies $|d - (f_1 + f_2)| \leq 5 \times f_1$; and

wherein said first lens and said second lens are arranged such that a relationship between said focal length f_1 of said first lens and said focal length f_2 of said second lens becomes $f_2/f_1 \geq 5$.

2. (currently amended) An optical transmission module comprising:
a light emitting element;
an optical fiber;
a first lens for collimating light from said light emitting element; [[and]]
a second lens for focusing said collimated light to said optical fiber;

a package to which the second lens is fixed to maintain airtightness at an inside of the package; and

a subassembly on which the light emitting element and the first lens are mounted, the subassembly being disposed in the inside of the package to be fixed to a bottom face of the package;

wherein when a focal length of said first lens is designated by a notation f_1 and a focal length of said second lens is designated by a notation f_2 , said first lens and said second lens are arranged such that an optical distance between a principal plane of a side of said first lens proximate to said second lens and a principal plane of a side of said second lens proximate to said first lens substantially equals to $f_1 + f_2$; and

wherein said first lens and said second lens are arranged such that a relationship between said focal length f_1 of said first lens and said focal length f_2 of said second lens becomes $f_2/f_1 \geq 5$.

3. (original) The optical transmission module according to Claim 2, wherein said first lens and said second lens are arranged such that said optical distance d satisfies $|d - (f_1 + f_2)| \leq 2 \times f_1$.

4. (canceled)

5. (canceled)

6. (currently amended) The optical transmission module according to Claim 1, wherein said first lens has a structure adjusted on the subassembly by a passive alignment system.

7. (currently amended) The optical transmission module according to Claim 2, wherein said first lens has a structure adjusted on the subassembly by a passive alignment system.

8. (currently amended) The optical transmission module according to Claim 1,

wherein the subassembly is made of a silicon board, and said first lens is mounted on a groove formed on [[a]] the silicon board.

9. (currently amended) The optical transmission module according to Claim 2,

wherein the subassembly is made of a silicon board, and said first lens is mounted on a groove formed on [[a]] the silicon board.

10. (original) The optical transmission module according to Claim 1, wherein an isolator for restraining incidence of reflected return light to said light emitting element is arranged at either of between optical axes of said first lens and said second lens and between optical axes of said second lens and said optical fiber.

11. (original) The optical transmission module according to Claim 1, wherein an isolator for restraining incidence of reflected return light to said light emitting element is arranged at either of between optical axes of said first lens and said second lens and between optical axes of said second lens and said optical fiber.

12. (original) The optical transmission module according to Claim 1, wherein said light emitting element is a laser having an output equal to or smaller than 10 mW (10 dBm).

13. (original) The optical transmission module according to Claim 2, wherein said light emitting element is a laser having an output equal to or smaller than 10 mW (10 dBm).

14. (original) The optical transmission module according to Claim 12,

wherein said optical module is connected to an optical fiber network having a transmission capacitance of 2.5 Gbit/s and a transmission distance equal to or larger than 15 km, or a transmission capacitance equal to or larger than 10 Gbit/s and a transmission distance equal to or larger than 2 km.

15. (original) The optical transmission module according to Claim 13, wherein said optical module is connected to an optical fiber network having a transmission capacitance of 2.5 Gbit/s and a transmission distance equal to or larger than 15 km, or a transmission capacitance equal to or larger than 10 Gbit/s and a transmission distance equal to or larger than 2 km.

16. (original) The optical transmission module according to Claim 12, wherein said optical module is connected to an optical fiber network having a transmission capacitance equal to or larger than 10 Gbit/s and a transmission distance equal to or smaller than 2 km.

17. (original) The optical transmission module according to Claim 13, wherein said optical module is connected to an optical fiber network having a transmission capacitance equal to or larger than 10 Gbit/s and a transmission distance equal to or smaller than 2 km.

18. (new) The optical transmission module according to Claim 1, wherein an optical axis of the first lens is shifted from an optical axis of the second lens in a direction orthogonal to the optical axis of the first lens with respect to the bottom face of the package; and wherein an optical coupling loss between the first lens and the second lens is less than 2 dB.

19. (new) The optical transmission module according to Claim 18,

wherein a positional shift of the optical axis of the first lens from the optical axis of the second lens in the direction orthogonal to the optical axis of the first lens with respect to the bottom face of the package is within 100 μm .

20. (new) The optical transmission module according to Claim 18, wherein a light emitting position of the light emitting element is shifted from the optical axis of the first lens in the direction orthogonal to the optical axis of the first lens with respect to the bottom face of the package within 20 μm .

21. (new) The optical transmission module according to Claim 1, wherein the light emitting element is fixed to the subassembly by a bonding agent.

22. (new) The optical transmission module according to Claim 21, wherein the bonding agent comprises a solder.

23. (new) The optical transmission module according to Claim 1, wherein the subassembly is fixed to the bottom face of the package by a bonding agent with a position of the second lens previously fixed to the package.

24. (new) The optical transmission module according to Claim 23, wherein the bonding agent comprises a solder.

25. (new) The optical transmission module according to Claim 1, wherein the first lens and the second lens are arranged such that a relationship between the focal length f_1 and the total length f_2 becomes $f_2/f_1 \geq 8$.

26. (new) The optical transmission module according to Claim 2, wherein an optical axis of the first lens is shifted from an optical axis of the second lens in a direction orthogonal to the optical axis of the first lens with respect to the bottom face of the package; and

wherein an optical coupling loss between the first lens and the second lens is less than 2dB.

27. (new) The optical transmission module according to Claim 26, wherein a positional shift of the optical axis of the first lens from the optical axis of the second lens in the direction orthogonal to the optical axis of the first lens with respect to the bottom face of the package is within 100 μm .

28. (new) The optical transmission module according to Claim 26, wherein a light emitting position of the light emitting element is shifted from the optical axis of the first lens in the direction orthogonal to the optical axis of the first lens with respect to the bottom face of the package within 20 μm .

29. (new) The optical transmission module according to Claim 2, wherein the light emitting element is fixed to the subassembly by a bonding agent.

30. (new) The optical transmission module according to Claim 2, wherein the subassembly is fixed to the bottom face of the package by a bonding agent with a position of the second lens previously fixed to the package.

31. (new) The optical transmission module according to Claim 2, wherein the first lens and the second lens are arranged such that a relationship between the focal length f_1 and the focal length f_2 becomes $f_2/f_1 \geq 8$.